

this disease. **METHODS:** Network Meta Analysis using Winbugs (Bayesian, Markov chain model using dedicated software), which allows to make an informed decision on the clinical effectiveness ranking of some of the healthcare technologies (active substances) used in the treatment of Pulmonary Arterial Hypertension (PAH). The ranking is then compared with the ICER, currently in use by UK NICE and the treatment guidelines set by the UK NHS. **RESULTS:** Using the above methods, the ranking of healthcare technologies (active substances) used in PAH has been established and different scenarios have been identified, with regard to increasing efficiency of public healthcare expenditure on PAH. **CONCLUSIONS:** The various scenarios proposed in this analysis, once confirmed, will contribute to a gain in efficiency of public healthcare expenditure on PAH in the UK.

#### PCV176 DEVELOPMENT OF MEDICAL AND TECHNOLOGICAL DOCUMENTS ON STANDARDIZATION OF MEDICAL CARE IN CARDIOVASCULAR DISEASES IN UKRAINE

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**OBJECTIVES:** Cardiovascular diseases are the leading cause of death and disability in the population of most countries, including Ukraine. Ukraine faces a significant contribution of cardiovascular diseases in the formation of disability-adjusted life year (DALY): men – for 27%, women – for 33% (2013). **METHODS:** At the end of 2014 the multidisciplinary working groups on the development of guidelines and protocols on different areas of cardiovascular diseases were approved. According to the results of a systematic literature review conducted in the databases Medline, PubMed, DynaMed, G-I-N etc. ESC, ACCF/AHA and NICE guidelines were selected for adaptation in Ukraine. **RESULTS:** During the meetings the working groups discussed the opportunities to meet the guidelines' recommendations in real conditions in Ukraine. For example, there were debates concerning mandatory evaluation of highly sensitive troponin on the 99th percentile among patients with NSTEMI, or the appointment of new antiplatelet drugs with high evidence base, which were not registered in Ukraine at this stage (eg. Prasugrel or Argatroban). The adapted guidelines for the treatment of acute and chronic coronary artery disease included separate sections with recommendations for revascularization from 2014 ACCF/AHA guideline, which allows the doctor to stratify patient against the risk of complications and identify high-risk patients who should be enforced urgent percutaneous coronary intervention. As a result of the work there will be prepared adapted clinical guidelines and unified clinical protocols on Acute Coronary Syndromes Without ST Segment Elevation, Stable Coronary Artery Disease, Pulmonary Hypertension, Prevention of Cardiovascular Disease, Dyslipidemia, Heart Failure, and Atrial Fibrillation. **CONCLUSIONS:** Development of medical and technological documents on standardization of medical care in cardiovascular diseases will allow to harmonize Ukrainian practice with international recommendations and timely provide quality medical care for the relevant areas.

#### PCV177 HEART FAILURE MANAGEMENT: A NATIONWIDE POPULATION-BASED COHORT STUDY USING THE FRENCH EGB DATABASE

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**OBJECTIVES:** To describe and analyze heart failure (HF) patients, disease pathway and related healthcare resource use and expenditures in France. **METHODS:** Analysis was based on EGB ("Echantillon Généraliste des Bénéficiaires") database, a permanent random sample (1/97) of the French national healthcare insurance system database (SNIIRAM), linked with the national hospital discharge summary database (PMSI). Patients were selected on the following criteria: HF classified as long-term disease (ALD scheme) in 2012 and/or at least 1 HF hospitalization (ICD-10 codes) on 2008-2012 period and/or at least 3 reimbursements of HF recommended drugs (including beta-blockers (BB), angiotensin-converting-enzyme inhibitors (ACEi), angiotensin-receptor-blockers (ARB), diuretics, digoxin, ivabradine) in 2012. **RESULTS:** 12,981 patients (average age: 74.8 years; 51.6% of men) were included, representing a HF prevalence of 2.2% in the total French population. Most of patients visited a general practitioner (93.1%) on regular basis (9.3 visits/year), but only few of them visited a cardiologist (37.0%) through the year (0.67 visit/year). HF recommended drugs were not prescribed to all patients (BB: 60.3%; ACEi/ARB: 53.3%; diuretics: 46.0%) and the recommended triple therapy (BB+ACEi/ARB+diuretics) was prescribed to only few of them (16.4%). Almost half of patients (47.3%) were hospitalized within the year (1.3 hospitalizations/year), with a quarter of these hospital stays related to HF (27.0%). The annual age-standardized mortality rate was 4.6 higher than in the full EGB database (939.0 versus 71.1 per 10,000 persons). Annual average healthcare costs were 7,956€/patient, mostly driven by hospitalizations (3,683€; 46.3%), drugs (1,287€; 16.2%), paramedical visits (980€; 12.3%) and medical visits (464€; 5.8%). **CONCLUSIONS:** Patients are not optimally managed for their HF, with a limited healthcare resource use. Despite a high rate of hospitalization, cardiologist visits remain at a very low frequency in this HF population. Better referring these patients to cardiologists should improve their management and optimize drugs prescription as recommended in the guidelines.

#### PCV178 INVESTIGATING THE RELATIONSHIP BETWEEN "SEVERITY OF ILLNESS" AND THE "MODIFIED RANKIN SCALE" IN ISCHEMIC STROKE PATIENTS WITH RESPONSE MAPPING

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**OBJECTIVES:** To investigate the relationship between the APR-DRG severity of illness index (SOI) used to determine the reimbursement/payment level for stroke

hospitalisation, and the modified Rankin Scale (mRS), the most frequently used outcome measure in stroke trials. **METHODS:** Data from all ischemic stroke hospitalizations from a teaching hospital in Belgium were collected between 2006 and 2009. Data collection included the SOI, patient characteristics (age, gender), risk factors (hypertension, smoking, hypercholesterolemia, diabetes, CAD, PAD, previous stroke), clinical parameters (aorta-atherosclerosis, cancer, TOAST (large-artery atherosclerosis, cardioembolism, small-vessel occlusion, other), microbleeds, atrial fibrillation, akinesia/hypokinesia, endocarditis, MI), functional scales (NiH, mRS), repeat events. An ordered multinomial regression estimated the relationship between the SOI and these covariates. Using the regression parameters and the mean value of the other covariates, predicted values were generated for each combination of the mRS and the SOI. Monte Carlo simulations generated a set of predicted SOI values per patient (response mapping). Data from 2010 and 2011 were used for validation of the regression model. **RESULTS:** 559 hospitalizations were used for the regression analysis. Factors that were discriminating in predicting the correct SOI category were the mRS ( $p < 0.001$ ), age ( $p = 0.0017$ ), NIH at arrival in hospital ( $p < 0.001$ ), TOAST ( $p = 0.0129$ ), atrial fibrillation (0.0217) and repeat in-hospital event ( $p = 0.0031$ ). Generating Monte Carlo predicted values demonstrated good concordance across SOI levels at the population level (2.3% vs 2.0% categorized in SOI1, 49.8% vs 50.3% in SOI2, 32.9% vs 31.4% in SOI3, 15.4% vs 16.0% in SOI4, for the true and the simulated proportions respectively), and the root mean-squared error was 0.33. Validation of the data with 588 hospitalizations from 2010 and 2011 confirmed the good fit of the model. **CONCLUSIONS:** Factors affecting the reimbursement/payment level of a stroke admission are age, location of the ischemia, atrial fibrillation, scores on stroke functional scales and new in-hospital events.

#### PCV179 IRON DEFICIENCY IN PATIENTS WITH CHRONIC HEART FAILURE: A SYSTEMATIC LITERATURE REVIEW

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**OBJECTIVES:** Iron deficiency (ID) is highly prevalent in chronic heart failure (CHF) patients and imposes a significant disease burden for CHF patients with enormous impact on their outcome. Thus, this study was designed to identify epidemiological data, screening and treatment guidelines, costs as well as outcome of intravenous iron treatment in patients with CHF and iron deficiency. **METHODS:** A comprehensive literature review was undertaken for all publications from 1998 to September 2014 using Medline, EMBASE, Cochrane, Science Direct and Pubmed databases, comprising English and German articles. The review focused on studies based on patients with chronic heart failure and iron deficiency, with or without anemia. Articles were systematically selected if they included data for iron deficiency on at least one of the following criteria: epidemiology, screening and treatment guidelines, costs, clinical outcomes. **RESULTS:** Database search yielded 5,132 articles and 55 additional articles were identified via secondary hand searches. Of the 73 eligible articles; 30 provided information on epidemiological data, 14 on screening and treatment guidelines, 15 on costs and 14 on clinical outcomes. The prevalence of CHF ranges between 0.88-6.4%. Out of these, 8-53% suffer from iron deficiency depending on the disease severity (New York Heart Association classes - NYHA) of heart failure. According to the ESC Guidelines 2012 intravenous iron may be considered to improve symptoms, quality of life and exercise capacity based on the data of FCM (FAIR-HF, CONFIRM-HF-based on 456 patients). Considering the included studies of this review, healthcare expenditure on CHF consumes 1-2% of the total healthcare budget. CHF patients with ID induce higher healthcare costs compared to non-iron deficient patients (+24%). **CONCLUSIONS:** CHF represents a major and growing public health problem and is often associated with ID as co-morbidity. IV iron can be an option to improve outcome (patient status), and reduce health care costs.

#### PCV180 TOTAL CHOLESTEROL (TC), LOW-DENSITY LIPOPROTEIN CHOLESTEROL (LDL-C) AND HIGH-DENSITY LIPOPROTEIN CHOLESTEROL (HDL-C) LEVELS IN PATIENTS WITH HYPERTENSION (HT), DIABETES (DM), BOTH (HT AND DM) AND CHRONIC KIDNEY DISEASE (CKD)

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**OBJECTIVES:** One of the main modifiable risk factors is the blood lipid levels, due to changes in lifestyle and treatment. The aim of this study is to characterize total cholesterol, low-density lipoprotein cholesterol (LDL-C) and high-density lipoprotein cholesterol (HDL-C) levels in adults with hypertension, diabetes, HT and DM, and CKD, reported to Cuenta de Alto Costo, 2014. **METHODS:** Descriptive and retrospective study. The information was obtained from the medical records of approx. 53 health insurance companies in Colombia. Data from 2,995,061 patients was used. Stata 13 was used for data analysis. Qualitative variables were described by its frequency distribution. **RESULTS:** 73% of patients had diagnosis of HT, 6.7% of DM, 19.6% of HT and DM, and 30% had CKD. In the population with HT, 30.6% had TC levels in upper limits and 16.4% in a high level. In patients with DM, 54.3% had desirable levels. In patients with both diseases, 25.5% had TC levels in upper limits and 14.1% in a high level. In CKD patients, 15% had high level of TC. Regarding HDL levels, 56.2% HT patients had HDL levels between 40-60mg/dl. Near 36.1% of DM patients had low HDL levels (<40mg/dl), patients with both diseases had similar levels (33.5%). Optimum LDL levels were identified in 42.8% of patients with both diseases (HT and DM), in contrast with 32.8% and 35% HTA and DM patients respectively. Around 9% of both diseases had high LDL levels and 4% had very high LDL levels. 54% of CKD patients had HDL levels between 40-60mg/dl and 27.8% had HDL levels under 40mg/dl. In CKD patients we found that 8.3% had high LDL-C levels. **CONCLUSIONS:** patients with both diseases (HT and DM) had better LDL and TC levels than patients with other diseases, however HDL-C levels under 40mg/dl were higher in this patients group.